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**COMBINED DECLARATION AND POWER OF ATTORNEY FOR  
ORIGINAL, DESIGN, NATIONAL STAGE OF PCT, SUPPLEMENTAL,  
DIVISIONAL, CONTINUATION OR CONTINUATION-IN-PART APPLICATION**

As a below named inventor, I hereby declare that :

My residence, post office address and citizenship are as stated below next to my name,

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled :

POLYPEPTIDES INVOLVED IN THE BIOSYNTHESIS OF COBALAMINS AND/OR COBAMIDES.  
DNA SEQUENCES CODING FOR THESE POLYPEPTIDES. PREPARATION METHOD AND THEIR USE  
the specification of which

- a. ☒ is attached hereto
- b. ☐ was filed on \_\_\_\_\_ as application Serial No. \_\_\_\_\_ and  
was amended on \_\_\_\_\_ (if applicable).

**PCT FILED APPLICATION ENTERING NATIONAL STAGE**

- c. ☒ was described and claimed in International Application No. PCT/FR91/00054 filed on  
January 30, 1991 and as amended on January 6, 1992. (if any).

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations, § 1.56 (a).

☒ I hereby claim foreign priority benefits under Title 35, United States Code § 119 of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed :

☐ The attached 35 U.S.C. § 119 claim for priority for U.S. application(s) listed below forms a part of this declaration.

Country	Application Number	Date of filing (day, month, yr)	Date of issue (day, month, yr)	Priority Claimed
France	90 01137	31 January 1990		<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
				<input type="checkbox"/> YES <input type="checkbox"/> NO
				<input type="checkbox"/> YES <input type="checkbox"/> NO

ADDITIONAL STATEMENTS FOR  
DIVISIONAL, CONTINUATION OR CONTINUATION-IN-PART

I hereby claim the benefit under Title 35, United States Code § 120 of any United States application(s) listed below.

Application Serial No.	Filing Date	Status (patented, pending, abandoned)

☐ In this continuation-in-part application, insofar as the subject matter of any of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, § 112, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, § 1.56(a) which occurred between the filing date of the prior application and the national or PCT international filing date of this application.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or Imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

I hereby appoint the following attorneys and/or agents with full power of substitution and revocation, to prosecute this application, to receive the patent, and to transact all business in the Patent and Trademark Office connected therewith: Jerome G. Lee (Reg. No. 16,967), John D. Foley (Reg. No. 16,836), John A. Diaz (Reg. No. 19,550), Thomas P. Dowling (Reg. No. 19,221), John C. Vassil (Reg. No. 19,098), Warren H. Rotert (Reg. No. 19,659), Alfred P. Ewert (Reg. No. 19,887), David H. Pfeffer, P.C. (Reg. No. 19,825), Harry C. Marcus (Reg. No. 22,390), Robert E. Paulson (Reg. No. 21,046), Stephen R. Smith (Reg. No. 22,615), Kurt E. Richter (Reg. No. 24,052), J. Robert Dailey (Reg. No. 27,434), Eugene Moroz (Reg. No. 25,237), John F. Sweeney (Reg. No. 27,471), Arnold I. Rady (Reg. No. 26,601), Christopher A. Hughes (Reg. No. 26,914), William S. Feiler (Reg. No. 26,728), Joseph A. Calvaruso (Reg. No. 28,287), James W. Gould (Reg. No. 28,859), Richard C. Komson (Reg. No. 27,913), Israel Blum (Reg. No. 26,710), Bartholomew Verdirame (Reg. No. 28,483), Maria C. H. Lin (Reg. No. 29,323) and Joseph A. DeGirolamo (Reg. No. 28,595), and Christopher E. Chalsen (Reg. No. 30,936) of Morgan & Finnegan whose address is: 345 Park Avenue, New York, New York 10154; and Frederick F. Calvetti (Reg. No. 28,557) whose address is Morgan & Finnegan, 1627 I Street, N.W., Washington, D.C. 20006.

☒ I hereby authorize the U.S. attorneys and/or agents named hereinabove to accept and follow instructions from FREDERICK F. CALVETTI as to any action to be taken in the U.S. Patent and Trademark Office regarding this application without direct communication between the U.S. attorneys and/or agents and me. In the event of a change in the person(s) from whom instructions may be taken I will so notify the U.S. attorneys and/or agents named hereinabove.

I hereby specify the following as the correspondence address to which all communications about this application are to be directed:

SEND CORRESPONDENCE TO:

MORGAN & FINNEGAN, 345 Park Avenue, New York, New York 10154

LOCAL TELEPHONE: (202) 857-7887

Full name of sole or first inventor Francis BLANCHE

Inventor's signature\* Francis Blanche 20 July 1992  
date

Residence PARIS FRANCE

Citizenship French

Post Office Address 41 rue des Solitaires, 75019 PARIS FRANCE

Full name of second joint inventor, if any Beatrice CAMERON

Inventor's signature\* Beatrice Cameron 20 July 1992  
date

Residence PARIS FRANCE

Citizenship French

Post Office Address 118 rue d'Assas, 75006 PARIS FRANCE

[XX] ATTACHED IS ADDED PAGE TO COMBINED DECLARATION AND POWER OF ATTORNEY FOR SIGNATURE BY THIRD AND SUBSEQUENT INVENTORS FORM.

Before signing this declaration, each person signing must:

1. Review the declaration and verify the correctness of all information therein; and
2. Review the specification and the claims, including any amendments made to the claims.

After the declaration is signed, the specification and claims are not to be altered.

To the inventor(s):

The following is cited in or pertinent to the declaration attached to the accompanying application:

(a) A duty of candor and good faith toward the Patent and Trademark Office rests on the inventor, on each attorney or agent who prepares or prosecutes the application and on every other individual who is substantively involved in the preparation or prosecution of the application and who is associated with the inventor, with the assignee or with anyone to whom there is an obligation to assign the application. All such individuals have a duty to disclose to the Office information they are aware of which is material to the examination of the application. Such information is material where there is a substantial likelihood that a reasonable examiner would consider it important in deciding whether to allow the application to issue as a patent. The duty is commensurate with the degree of involvement in the preparation or prosecution of the application.

\* \* \* \*

c) Any application may be stricken from the files if:

(1) An oath or declaration ... is signed in blank;

(2) An oath or declaration ... is signed without review thereof by the person making the oath or declaration;

(3) an oath or declaration ... is signed without review of the specification, including the claims ...;

or

(4) The application papers filed in the Office are altered after the signing of an oath or declaration ... referring to those application papers.

Title 35, U.S. Code, § 119

Benefit of earlier filing date in foreign country; right of priority

An application for patent for an inventor filed in this country by any person who has, or whose legal representatives or assigns have, previously regularly filed an application for a patent for the same inventor in a foreign country which affords similar privileges in the case of applications filed in the United States or to citizens of the United States, shall have the same effect as the same application would have if filed in this country on the date on which the application for patent for the same invention was first filed in such foreign country, if the application in this country is filed within twelve months from the earliest date on which such foreign application was filed; but no patent shall be granted on any application for patent for an invention which had been patented or described in a printed publication in any country more than one year before the date of the actual filing of the application in this country, or which had been in public use or on sale in this country more than one year prior to such filing.

Title 35, U.S. Code, § 120

Benefit of earlier filing date in the United States

An application for patent for an invention disclosed in the manner provided by the first paragraph of section 112 of this title in an application previously filed in the United States, or as provided by section 363 of this title, which is filed by an inventor or inventors named in the previously filed application shall have the same effect, as to such invention, as though filed on the date of the prior application, if filed before the patenting or abandonment of or termination of proceedings on the first application or an application similarly entitled to the benefit of the filing date of the first application and if it contains or is amended to contain a specific reference to the earlier filed application.

35, U.S. Code § 101

inventions patentable

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Title 35 U.S. Code § 102

Conditions for patentability; novelty and loss of right to patent

A person shall be entitled to a patent unless --

- (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country before the invention thereof by the applicant for patent, or
- (b) the invention was patented or described in a printed publication in this or foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States, or
- (c) he has abandoned the invention, or
- (d) the invention was first patented or caused to be patented, or was the subject of an inventor's certificate, by the applicant or his legal representatives or assigns in a foreign country prior to the date of the application for patent in this country on an application for patent or inventor's certificate filed more than twelve months before the filing of the application in the United States, or

\* \* \* \*

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent, or

(f) he did not himself invent the subject matter sought to be patented, or

(g) before the applicant's invention thereof the invention was made in this country by another who had not abandoned, suppressed, or concealed it. In determining priority of invention there shall be considered not only the respective dates of conception and reduction to practice of the invention, but also the reasonable diligence of one who was first to conceive and last to reduce to practice, from a time prior to conception by the other ...

Title 35, U.S. Code § 103

Conditions for patentability; non-obvious subject matter

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) or of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

Title 35, U.S. Code § 112 (in part)

Specification

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Please read carefully before signing the Declaration attached to the accompanying Application.

If you have any questions, please contact Morgan & Finnegan

ADDED PAGE TO COMBINED DECLARATION  
AND POWER OF ATTORNEY FOR SIGNATURE  
BY THIRD AND SUBSEQUENT INVENTORS

Full name of third joint inventor, if any Joel CROUZET

Inventor's signature\* Joel Crouzet 28 July 1992  
date

Residence PARIS FRANCE

Citizenship French

Post Office Address 48-52 rue des Meuniers, 75012 PARIS FRANCE

Full name of fourth joint inventor, if any Laurent DEBUSSCHE

Inventor's signature\* Laurent Debussche. 20 July 1992  
date

Residence PARIS FRANCE

Citizenship French

Post Office Address 8-10 rue de Chatillon, 75014 PARIS FRANCE

Full name of fifth joint inventor, if any Sophie LEVY SCHIL

Inventor's signature\* Sophie Levy-schil 23 juillet 1992  
date

Residence PARIS FRANCE

Citizenship French

Post Office Address 2 rue de Monttessuy, 75007 PARIS FRANCE

\* Before signing this declaration, each person signing must:

1. Review the declaration and verify the correctness of all information therein;  
and
2. Review the specification and the claims, including any amendments made to  
the claims.

After the declaration is signed, the specification and claims are not to be altered.



ADDED PAGE TO COMBINED DECLARATION  
AND POWER OF ATTORNEY FOR SIGNATURE  
BY THIRD AND SUBSEQUENT INVENTORS

Full name of sixth joint inventor, if any Denis THIBAUT

Inventor's signature\* Denis Thibaut 20 July 1992  
date

Residence PARIS FRANCE

Citizenship French

Post Office Address 28 rue Jean Colly, 75013 PARIS FRANCE

\* Before signing this declaration, each person signing must:

1. Review the declaration and verify the correctness of all information therein;  
and
2. Review the specification and the claims, including any amendments made to  
the claims.

After the declaration is signed, the specification and claims are not to be altered.

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of:	)	
	)	
Francis BLANCHE et al.	)	
	)	
Serial No.: 08/426,630	)	Group Art Unit: 1814
	)	
Filed: April 21, 1995	)	Examiner: Unknown
	)	
For: POLYPEPTIDES INVOLVED IN THE	)	
BIOSYNTHESIS OF COBALAMINS	)	
AND/OR COBAMIDES, DNA	)	
SEQUENCES CODING FOR THESE	)	
POLYPEPTIDES, PREPARATION	)	
METHOD AND THEIR USE	)	

**REVOCATION OF PRIOR POWER OF ATTORNEY  
AND APPOINTMENT OF NEW POWER OF  
ATTORNEY BY ASSIGNEE OF ENTIRE INTEREST**

Assistant Commissioner of Patents  
Washington, D.C. 20231

Sir:

The records of the United States Patent and Trademark Office indicate, by virtue of an assignment that was filed for recordation in parent application Serial No. 07/916,151, which parent application was filed under 35 U.S.C. § 371 on September 14, 1992, that Rhône-Poulenc Biochimie et al. is the record owner of the entire right, title and interest in the above-identified patent application. The Assignment has not yet been recorded so the Declarant does not know the Reel and Frame Number. A copy of the assignment is attached.

Rhône-Poulenc Rorer S.A., a company organized and existing under the laws of France, having its registered office in Antony, France, hereby declares that it has ownership

interest in Rhône-Poulenc Biochimie et al.

Declarant has reviewed all the documents in the chain of title of the above-identified patent application and, to the best of Declarant's knowledge and belief, title is in the assignee, Rhône-Poulenc Biochimie et al. The Declarant (whose title is supplied below) is empowered to sign this certificate on behalf of the assignee by virtue of the ownership interest referred to above.

Declarant, as parent company of the assignee of the entire interest of the above-identified application, Rhône-Poulenc Biochimie et al, hereby revokes all powers of attorney previously given and hereby grants new powers of attorney to the following:

FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER, Reg. No. 22,540, Douglas B. Henderson, Reg. No. 20,291; Ford F. Farabow, Jr., Reg. No. 20,630; Arthur S. Garrett, Reg. No. 20,338; Donald R. Dunner, Reg. No. 19,073; Brian G. Brunsvold, Reg. No. 22,593; Tipton D. Jennings, IV, Reg. No. 20,645; Jerry D. Voight, Reg. No. 23,020; Laurence R. Hefter, Reg. No. 20,827; Kenneth E. Payne, Reg. No. 23,098; Herbert H. Mintz, Reg. No. 26,691; C. Larry O'Rourke, Reg. No. 26,014; Albert J. Santorelli, Reg. No. 22,610; Michael C. Elmer, Reg. No. 25,857; Richard H. Smith, Reg. No. 20,609; Stephen L. Peterson, Reg. No. 26,325; John M. Romary, Reg. No. 26,331; Bruce C. Zotter, Reg. No. 27,680; Dennis P. O'Reilley, Reg. No. 27,932; Allen M. Sokal, Reg. No. 26,695; Robert D. Bajefsky, Reg. No. 25,387; Richard L. Stroup, Reg. No. 28,478; David W. Hill, Reg. No. 28,220; Thomas L. Irving, Reg. No. 28,619; Charles E. Lipsey, Reg. No. 28,165; Thomas W. Winland, Reg. No. 27,605; Basil J. Lewris, Reg. No. 28,818; Martin I. Fuchs, Reg. No. 28,508; E. Robert Yoches, Reg. No. 30,120; Barry W. Graham, Reg. No. 29,924;

Susan Haberman Griffen, Reg. No. 30,907; Richard B. Racine, Reg. No. 30,415; Thomas H. Jenkins, Reg. No. 30,857; Robert E. Converse, Jr., Reg. No. 27,432; Clair X. Mullen, Jr., Reg. No. 20,348; Christopher P. Foley, Reg. No. 31,354; John C. Paul, Reg. No. 30,413; Roger D. Taylor, Reg. No. 28,992; David M. Kelly, Reg. No. 30,953; Kenneth J. Meyers, Reg. No. 25,146; Carol P. Einaudi, Reg. No. 32,220; Walter Y. Boyd, Jr., Reg. No. 31,738; Steven M. Anzalone, Reg. No. 32,095; Jean B. Fordis, Reg. No. 32,984; Barbara C. McCurdy, Reg. No. 32,120; James K. Hammond, Reg. No. 31,964; Richard V. Burgujian, Reg. No. 31,744; J. Michael Jakes, Reg. No. 32,824; Bryan C. Diner, No. 32,409 with full power of substitution and revocation to prosecute this application and any interference proceeding in which it is involved and to transact all business in the Patent and Trademark Office connected therewith.

Please send all future correspondence concerning this application to Finnegan, Henderson, Farabow, Garrett & Dunner at the following address:

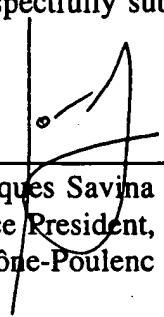
Finnegan, Henderson, Farabow,  
Garrett & Dunner  
1300 I Street, N.W.  
Suite 700  
Washington, D.C. 20005-3315

I hereby declare that all statements made herein of my own knowledge are true, and that all statements made on information and belief are believed to be true; and further, that these statements are made with the knowledge that willful false statements, and the like so made, are punishable by fine or imprisonment, or both, under § 1001, Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

If there are any fees due in connection with the filing of this paper not otherwise accounted for, please charge the fees to Deposit Account No. 06-0916.

Dated: July 26, 1995

Respectfully submitted,



\_\_\_\_\_  
Jacques Savina  
Vice President, Patents  
Rhône-Poulenc Rorer S.A.

**Certificate Under 37 CFR 3.73(b)**

Applicant: Francis BLANCHE et al.

Application No.: 08/426,630

Filed: April 21, 1995

For: POLYPEPTIDES INVOLVED IN THE BIOSYNTHESIS OF COBALAMINS  
AND/OR COBAMIDES, DNA SEQUENCES CODING FOR THESE  
POLYPEPTIDES, PREPARATION METHOD AND THEIR USE

Rhone-Poulenc Rorer, S.A., a corporation of France

certifies that it has the right to control the prosecution of the patent application identified above by virtue of ownership interest of Rhone-Poulenc Rorer, S.A. in the assignee company of said application, Rhône-Poulenc Biochimie et al.. The assignee has the entire right, title and interest in the patent application identified above by virtue of an assignment from the inventor(s) of the patent application identified above. The assignment was filed for recordation in parent application Serial No. 07/916,151 in the Patent and Trademark Office, which parent application was filed under 35 U.S.C. § 371 on September 14, 1992. A copy of the assignment is attached.

The undersigned has reviewed all the documents in the chain of title of the patent application identified above and, to the best of undersigned's knowledge and belief, title is in the assignee identified above.

The undersigned (whose title is supplied below) is empowered to sign this certificate on behalf of the assignee.

I hereby declare that all statements made herein of my own knowledge are true, and that all statements made on information and belief are believed to be true; and further, that these statements are made with the knowledge that willful false statements, and the like so made, are punishable by fine or imprisonment, or both, under Section 1001, Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Date:

July 26, 1995

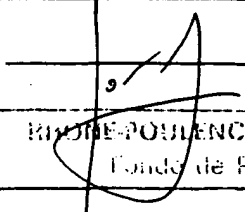
Name:

Jacques SAVINA

Title:

Vice President Patents Rhone-Poulenc Rorer S.A.

Signature:

  
**RHONE-POULENC RORER S.A.**  
Fonds de Pouvoir